

REMARKS

Reconsideration is respectfully requested. Claim 17, 21 and 22 are amended herein.

The drawings are objected to. Drawing amendments are submitted herewith to address the Examiner's concerns.

Claims 21 and 22 are rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement.

Applicant respectfully traverses and submits declarations herewith directed to this point.

Claims 21 and 22 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention and as allegedly being incomplete.

Applicant respectfully traverses and submits declarations herewith directed to this point.

Claim 17 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kitazawa and over Kitazawa in view of Carlin. Applicant respectfully traverses. It is respectfully submitted that Kitazawa alone or in combination with Carlin neither teaches nor suggests the claims.

The applicant studied the arguments of the Examiner and being respectfully disagreed with the conclusions believes that

it is necessary to bring additional arguments in favor of the application and to amend the claims making them more clear and persuasive. The applicant with understanding and gratitude accepts the Examiner's proposal to bear the burden of the due proof: "...the burden shifts to the applicant to show the unobvious differences...".

First of all the applicant would like to attract attention of the Examiner to the following List of Principally Important Circumstances.

The studies of micrometeorites in the near Earth space by methods using registration of micrometeorite's collisions with targets deployed onboard spacecraft have been carried out beginning the first space flight. A lot of methods and devices have been invented for such a purpose. Many of them may be found available in the publications by NASA and ESA. These studies are necessary for the maintenance of safety of space flights. To reach this goal means to find out the probability of collisions of micrometeorites with targets characterized by dimension of a spacecraft. Taking into account that whereabouts of a spacecraft might be measured but with a significant inaccuracy the registration of collisions of micrometeorites with one from a multitude of targets (fields) characterized by dimension much more smaller than dimension of the spacecraft is simply senseless from the safety point of view. Such a registration becomes necessary only in the case of using of stochastic properties of

micrometeorite flows for generation of random numbers as it has been made in the applied invention. The applicant would like to emphasize that there are no mentions of registration of micrometeorites with a multitude of targets characterized by dimension much more smaller than dimension of the spacecraft in the contraposed patents. The multitude of sensors in the patent by Kitazawa appearingly serves for insured registration of each collision with the balloon as a whole. Actually there are no mentions of registration of collisions with some fields placed upon the balloon in the patent by Kitazawa.

For generation of random numbers in the interest of carrying out the games of chance the targets (fields) can not be arbitrary. They must be of the same form, of the same square, and of the same attitude. They must be reliable separated from each other so that any collision of a micrometeorite with any field would affect the state only on this field. They must be provided with identification markers to make a game possible. Contrary the imperative requirement of absence of ambiguity would be broken away leading to impossibility of a game because the difference between winning and loss would be eroded. This requirement is strictly observed in the applied invention but is roughly broken in the contraposed patents. For example, in the device by Kitasawa, based on the flexible round balloon, it is impossible to define equal fields with equal attitude, which would exclude a

multiple actuation of sensors, registering tensions in the material of balloon during a collision with micrometeorite.

The registration of collisions of the game fields with micrometeorites is not the only step of generation of random numbers. On the base of the data on collisions it is necessary to form the random numbers themselves so that they may be acceptable for the games. Theoretically each collision may be characterized by multitude of parameters such as mass, form, velocity and direction of movement of a micrometeorite, as well as by identification marker of the collided field or by time of the collision. Use of each of these parameters leads to necessity of corresponding apparatus onboard the spacecraft. Analysis of these parameters and their combinations carried out by applicant has shown that the most acceptable for a space game form of the random numbers is the complex one. Each complex random number has to be characterized by a pair of common numbers one of which determines the identification marker of the game field involved into collision and the other one determines the exact time of collision. The introduced form of space random numbers is far from evident. In any way this form has been chosen from a multitude of possible options and till now has never been published. There are no mentions of random numbers as well as of the complex form of their presentation in the contraposed patents.

It is important to note that it is extremely dangerous to transmit an open telemetry signal carrying the game random numbers. It leads to a risk of interception and dishonest use. So before transmission the signal must be encrypted. The approach has always been implied by applicant following the gaming designation of the random number generator. There are no mentions of encryption in the contraposed patents.

Farther, the applicant would like to reply to the Examiner alphabetically as follows.

a. The applicant attracts attention of the Examiner to the fact that drawing depicting a spacecraft with the game fields according to the claim 17 had been presented to the Examiner earlier. According to depiction of the claims 21 and 22 the applicant believes that these claims exactly describe methods and may not be depicted by drawings.

b. The applicant agrees with the Examiner and acknowledges the necessity of introduction of the term "Random Number Generator" into the claim 17.

c. To eliminate the misunderstandings caused by insufficiently clear description of features of the applied invention, as it is presented above in the List of Principally Important Circumstances, the applicant believes that it is necessary to amend the claim 17 to emphasize the features of game fields, form of random numbers and encryption of the game signal.

d. The contraposed device by Kitazawa is not a Random Number Generator.

e. The contraposed device by Kitazawa in principle can not be used as registration part for any game Random Number Generator due to the list of causes:

1. this device is not able to exclude simultaneous actuation of several sensors registering changes in tension of the flexible material of the balloon caused by a collision with a micrometeorite;

2. it is impossible to locate on the round balloon of this device the fields with equal attitude;

3. in the description of this device there is no special means for registering exact time of the game events, which for generation of space random numbers is not less important than for GPS satellites (equipped with atomic clocks).

f. The contraposed device by Kitazawa has no relation to any method of playing games. This assertion follows directly from the description by Kitazawa.

g. The applicant agrees with the expert on insufficient clearness of the terms "conventional roulette" and "conventional lottery". Instead them there have to be used the terms "roulette" and "lottery".

h. The applicant possesses the official witnesses from distinguished representatives of the space industry directly asserting that from the description of space Random Number

Generator of claim 17 they clearly understand how to play space games following the gaming procedures of roulette and lottery. Please see the attached declarations of Vladimir P. Nikitsky, Professor, Doctor of Science, Engineering, Director General, International R&D Center of Space Payloads, and of Roman I Yakimenko, Ph.D, Engineering, Head of Division Federal Space Agency, Russia. Nevertheless the applicant acknowledges the insufficient neatness of his wordings and accordingly amends claims 21 and 22.

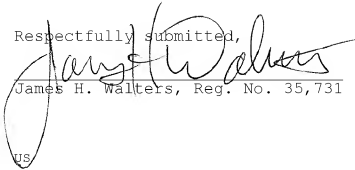
i. The applicant attracts attention of the Examiner that taking into account the amendments of claims 21 and 22 the applied invention possesses the exact structure characterized by exact steps of playing a space game which is thoroughly absent in the contraposed patents.

Reconsideration is respectfully requested.

In light of the above noted amendments and remarks, this application is believed in condition for allowance and notice thereof is respectfully solicited. The Examiner is asked to contact applicant's attorney at 503-224-0115 if there are any questions.

It is believed that no fees are due with this filing. However, if it is determined that fees are required to keep the application pending, please charge deposit account 503036. If a refund is owed, please refund deposit account 503036.

Respectfully submitted,

  
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